

### AMENDMENTS TO THE CLAIMS

1. (Currently amended) A dye-sensitized photoelectric conversion apparatus, comprising:  
a semiconductor layer comprising a photosensitizing dye, wherein a charge carrier generated by allowing light to be incident in the photosensitizing dye can be drawn out through the semiconductor layer,  
wherein the semiconductor layer comprises: is formed by a plurality of regions, having different energy levels from one another, of a passage through which the charge carrier is transferred, and  
a plurality of different energy levels through which the charge carrier is transferred;  
a first semiconductor region having, on a side to which the photosensitizing dye is adhered, an irregular contour that includes a concave portion and a convex portion; and  
a second semiconductor region that is joined to the irregular contour of the first semiconductor region, wherein comprises the regions in which the plurality of different energy levels in the semiconductor layer are reduced stepwise and/or or continuously in a direction of drawing the charge carrier out.
2. (Currently amended) The dye-sensitized photoelectric conversion apparatus as set forth in Claim 1, wherein ~~the semiconductor layer is formed by a plurality of layers, having different minimum energy levels from one another, of conduction band and~~ the plurality of different energy levels comprise a plurality of semiconductor films within the semiconductor layer ~~the energy levels are reduced stepwise and/or continuously in the direction of drawing the charge carrier out.~~
3. (Currently amended) The dye-sensitized photoelectric conversion apparatus as set forth in Claim 1, wherein the plurality of ~~regions~~ different energy levels comprise a plurality of semiconductor materials in which constitutional elements are different from one another.
4. (Currently amended) The dye-sensitized photoelectric conversion apparatus as set forth in Claim 1, wherein the plurality of ~~regions~~ different energy levels comprise semiconductor materials

comprising same constitutional elements with one another and ratios of the constitutional elements ~~are changed~~ differ for each energy level ~~stepwise and/or continuously in the direction of drawing the charge carrier out.~~

5. (Currently amended) The dye-sensitized photoelectric conversion apparatus as set forth in Claim 1, wherein the plurality of ~~regions~~ different energy levels comprise semiconductor materials which are of a same element composition and are of different dopants from one another.

6. (Currently amended) The dye-sensitized photoelectric conversion apparatus as set forth in Claim 1, wherein the plurality of ~~regions~~ different energy levels comprise materials in which a same dopant is doped in a semiconductor material having a same element composition and a concentration of the dopant differs for each energy level ~~is changed stepwise and/or continuously in the direction of drawing the charge carrier out.~~

7. (Original) The dye-sensitized photoelectric conversion apparatus as set forth in Claim 1, wherein the photosensitizing dye is adhered on a surface of the semiconductor layer or impregnated inside the semiconductor layer.

8. (Canceled)

9. (Previously presented) The dye-sensitized photoelectric conversion apparatus as set forth in Claim 1, wherein the semiconductor layer comprising the photosensitizing dye and an electrolyte layer are laminated together between a pair of electrodes.

10. (Previously presented) The dye-sensitized photoelectric conversion apparatus as set forth in Claim 1, being comprised as a dye-sensitized photochemical cell.

11-24. (Canceled)

25. (New) The dye-sensitized photoelectric conversion apparatus as set forth in Claim 1, wherein the first semiconductor region comprises a patterned film implanted with ions.

26. (New) The dye-sensitized photoelectric conversion apparatus as set forth in Claim 1, wherein the first semiconductor region comprises an impurity diffusion layer.

27. (New) The dye-sensitized photoelectric conversion apparatus as set forth in Claim 1, wherein the first semiconductor region comprises sintered semiconductor particles.

28. (New) The dye-sensitized photoelectric conversion apparatus as set forth in Claim 1, wherein the second semiconductor region comprises a gap into which an electrolyte material is deposited.